

**REMARKS**

Claims 124-129 are pending in this application. Claims 124 and 127 are amended for clarity, as discussed herein. No new matter is introduced. The Office Action is discussed below:

***Response to Amendment:***

On pages 2-3 of the Office Action, the examiner has made comments on the amendment filed on June 14, 2011.

Applicants thank the examiner for withdrawal of the rejection of claims 124-129 under 35 U.S.C. 102(b) alleged as being anticipated by Dijkstra et al, in view of the arguments presented on June 14, 2011.

The examiner's new rejection of claims under 35 USC 112, first and second paragraphs, is discussed below.

The examiner has maintained the rejection of claims 127-129 under 35 U.S.C. 102(e) and alleged as being anticipated by Hyon et al (6,168,626). The examiner has newly rejected claims 124-126 under 35 U.S.C. 102(e) allegedly as being anticipated by Hyon et al (6,168,626) and claims 124-129 under 35 U.S.C. 102(e) allegedly as being anticipated by Shen et al (6,228,900). The anticipation rejections are discussed below.

***Response to Arguments and Priority Issue:***

In view of the examiner's withdrawal of Dijkstra, applicants provide no comments related to the reference as discussed by the examiner on page 3 of the Office Action.

Regarding the priority issue and Hyon, applicants maintains that the claimed invention was conceived and reduced to practice prior to January 20, 1995, as evidenced by Rule 1.131 Merrill declaration and its review in Dr. Orhun Muratoglu's declaration in a related application 11/184,803, as presented previously.

Applicants refer to the Rule 1.131 declaration of Merrill *et al.*, filed June 8, 2007, and the clarifications as filed with the previous response, filed March 15, 2010 that the evidence presented shows reduction to practice of the instantly claimed methods before

January 20, 1995. It also was evident that the polyethylene was first melted and then irradiated (see the Declaration of Merrill *et al.*, sections 10-11 and item b of Exhibit 1, for example), which sufficiently provides the evidence of reduction to practice of the claimed method. Hence, a method that involves irradiation is followed by subsequent melting to treat a polyethylene preform was reduced to practice before January 20, 1995. Accordingly, Hyon is not a prior art to the claimed invention.

On page 4 of the Office Action, the examiner opines that in the Declaration the statement "b" "crosslink as solid, melt, recrystallize" under Basic Motivation in Exhibit 1 is a statement of intent to explore but not evidence of a reduction to practice. Applicants disagree with the examiner and submit that the examiner has misconstrued the Rule 1.131 Merrill declaration and has not addressed the above arguments and the clarifications. Applicants point out, as the MPEP instructs:

The Examiner must then weigh all the evidence before him or her, including the specification and any new evidence supplied by applicant with the evidence and/or sound scientific reasoning previously presented in the rejection and decide whether the claimed invention is enabled. The Examiner should never make the determination based upon personal opinion. The determination should always be based on the weight of all the evidence.

See MPEP § 2164.05 (Rev. 6, September 2007 at 2100-199) (emphasis in original).

More specifically, applicants refer to sections 5 and 10 of the Rule 1.131 Merrill declaration that provide evidences of the conception and reduction to practice of the recited method steps. For example, in the section 5 of the declaration, item b) of Exhibit 1 establishes that prior to January 20, 1995, inventors conceived and reduced to practice a process in which UHMWPE bar stock had been "irradiated and then heated above the melting point". Applicants also quote from the declaration, for example, the inventors state at section 10 of the declaration that "Prior to January 20, 1995, we also developed another embodiment to preserve the highly disordered entangled state of the UHMWPE in order to solve the wear problem (see item b of Exhibit 1). The embodiment involved cross-linking the polyethylene in at room temperature ('cold irradiation') by irradiation and subsequent melting. The process is referred to as Cold-

irradiation and Subsequent Melting or "CISM" and is disclosed in U.S. Serial No. 08/726,313.

Applicants also refer the examiner to Dr. Orhun Muratoglu's declaration in a related application 11/184,803, as discussed above, in which Dr. Muratoglu reviewed Rule 1.131 Merrill declaration, and found that Irradiation and Subsequent Melting embodiment was conceived and reduced to practice prior to January 20, 1995.

In view of the above clarifications and amendments to the claims, applicants submit that Hyon *et al.* is not prior art to the claimed invention. Accordingly, withdrawal of the anticipation rejection is solicited.

***Claim Rejections:***

***Written Description Rejection:***

On pages 4-5 of the Office Action, the examiner rejects claims 124-129 under 35 U.S.C. 112, first paragraph, allegedly as failing to comply with the written description requirement. The examiner has agreed and found support in the specification that discloses heating at a temperature "of about 137°C to about 300°C, more preferably about 140°C to about 300°C, more preferably yet about 140°C to about 190°C, more preferably yet about 145°C to about 190°C, and most preferably about 150°C" in paragraph [0058] of PrePub 2004/0132856. However, the examiner contends that a temperature "of about 230°C" is not mentioned. Applicants disagree with the examiner and point out to the original specification page 30, original claims 99 and 106, for a support for the term of "about 230°C". Accordingly, withdrawal of the written description rejection is solicited.

***Indefiniteness Rejection:***

On pages 4-5 of the Office Action, the examiner rejects claims 124-126 under 35 U.S.C. 112, second paragraph, allegedly as being indefinite. According to the examiner, the recitation "subsequently irradiating the preform" does not clearly set forth what is intended by "subsequently". Applicants disagree with the examiner and point out that

claims recite all required steps in order for one skilled in the art to be able to practice the invention in view of the specification, and are as clear as issued U.S. Patent No. 6,316,158, from which the claims were originally based. However, without acquiescing in the rejection, in order to expedite the prosecution and for additional clarity, applicants amend the claims 124 and 127 to recite "from step b)". Withdrawal of the rejection is therefore solicited.

***Anticipation Rejection:***

On pages 5-7 of the Office Action, the examiner has maintained the rejection of claims 127-129 under 35 U.S.C. 102(e) and alleged as being anticipated by Hyon et al (6,168,626). The examiner has newly rejected claims 124-126 under 35 U.S.C. 102(e) allegedly as being anticipated by Hyon et al (6,168,626) and claims 124-129 under 35 U.S.C. 102(e) allegedly as being anticipated by Shen et al (6,228,900). Applicants respectfully disagree with the examiner and traverse the rejection.

Regarding the priority issue, applicants refer to above explanation and submit that Hyon *et al.* and Shen *et al.* are not prior art to the claimed invention.

Regarding Shen *et al.* (the '900 patent), the priority issue, as discussed above and as evidenced by the declaration and the Exhibits, applicants submit that the instantly claimed embodiment that recites irradiation is followed by melting, i.e. "IR-SM", was reduced to practice prior to January 20, 1995. Hence, a method that involves irradiation followed by subsequent melting was reduced to practice before January 20, 1995. Accordingly, Shen *et al.*, as filed July 9, 1996, is not a prior art to the claimed invention.

On page 7 of the Office Action, the examiner pointed out that "Shen et al disclose a process comprising irradiating preformed UHMWPE and remelting the irradiated UHMWPE in order to enhance the wear-resistance of polymers and in vivo implants obtained from the polymers." Applicants point out that the term "remelting" is not found in the instant claims, thus renders the cited disclosure irrelevant.

On page 7 of the Office Action, the examiner also pointed out that "The irradiated polymer is remelted at a temperature from about 100°C to about 160°C above the melting temperature of the irradiated polymer...." Again, applicants point out that term "remelting" is not found in the instant claims, thus renders the cited disclosure irrelevant. Applicants also point out that the cited "100°C" and up to 135°C are temperatures below the melting point of the polymeric material as recited in the claims. Thus, the cited disclosure is not relevant.

In view of the above explanations, applicants submit that Hyon *et al.* and Shen *et al.* are not prior art to the claimed invention. Accordingly, withdrawal of the anticipation rejection is solicited.

***Double Patenting Rejection:***

On pages 7-9 of the office action, the examiner maintains the provisional rejection of the claims 124-127 under the judicially created doctrine of obviousness-type double patenting and alleges as being unpatentable over claims 124-129, 131-134, and claims 124-125, 130, 143-146 of co-pending application serial nos. 10/197,209 and 09/764,445, respectively. In response, applicants submit, because applicants have not received any notice of allowance for the '209 or the '445 applications, the merits of this provisional rejection need not be discussed by at this time. See MPEP § 822.01 (Rev. 5, August 2006). More specifically, in this context, applicants refer the examiner to the MPEP § 804 I.B. that states:

***B. Between Copending Applications-Provisional Rejections***

Occasionally, the examiner becomes aware of two copending applications that were filed by the same inventive entity, or by different inventive entities having a common inventor, and/or by a common assignee, or that claim an invention resulting from activities undertaken within the scope of a joint research agreement as defined in 35 U.S.C. 103(c)(2) and (3), that would raise an issue of double patenting if one of the applications became a patent. Where this issue can be addressed without violating the confidential status of applications ( 35 U.S.C. 122), the courts have sanctioned the practice of making applicant aware of the potential double patenting problem if one of the applications became a patent by permitting the examiner to make a "provisional" rejection on the ground of double patenting. *In re Mott*, 539 F.2d 1291, 190 USPQ 536 (CCPA 1976); *In re Wetterau*, 356 F.2d 556, 148

USPQ 499 (CCPA 1966). The merits of such a provisional rejection can be addressed by both the applicant and the examiner without waiting for the first patent to issue.

The "provisional" double patenting rejection should continue to be made by the examiner in each application as long as there are conflicting claims in more than one application unless that "provisional" double patenting rejection is the only rejection remaining in at least one of the applications.

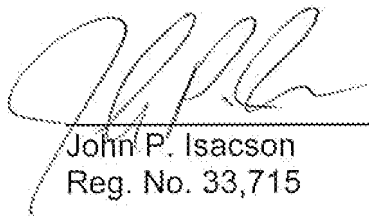
Accordingly, applicants request withdrawal of the provisional double-patenting rejection over the co-pending application serial nos. 10/197,209 and 09/764,445.

### REQUEST

Applicants submit that claims 124-129 are in condition for allowance, and respectfully request favorable consideration to that effect so that an interference can be declared with applicants as the senior party by virtue of the priority afforded by the priority applications. The examiner is invited to contact the undersigned at 202-654-6200 should there be any questions.

Respectfully submitted,

January 18, 2012  
Date

  
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